

AMENDMENTS TO THE SPECIFICATION

Please replace the following paragraph [0041] in the specification:

[0041] ~~FIG. 4 provides~~ FIGS. 4A-4D provide an exemplary schematic showing operation of first filter (leukoreduction-type filter) to selectively recover osteogenic cells (*i.e.*, platelets and nucleated cells) from a physiological solution.

Please replace the following paragraph [0046] in the specification:

[0046] ~~FIG. 9 provides~~ FIGS. 9A-9E provide an exemplary schematic showing operation of fat reduction filter to decrease fat particle content in physiological solution and a leukofilter to selectively recover osteogenic cells (*i.e.*, platelets and nucleated cells) from said physiological solution.

Please replace the following paragraph [0047] in the specification:

[0047] ~~FIG. 10 illustrates~~ FIGS. 10A-10E illustrate a specific embodiment wherein the filtration process utilizes an aggregate filter, such as a cellular and/or non-cellular fat reduction filter.

Please replace the following paragraph [0158] in the specification:

[0158] In ~~FIG. 4~~ FIGS. 4A-4D, there is a schematic showing operation of a sole (or first, as in some embodiments described below) filter (such as a leukocyte reduction-type filter), to selectively recover osteogenic cells (*i.e.* platelets and nucleated cells) from a physiological solution. In the Fill step (FIG. 4A), a physiological solution comprising both osteogenic and non-osteogenic cells and optionally comprising anticoagulant is injected into a collection bag **10**. In a filtration step (FIG. 4B), the physiological solution passes from the collection bag **10** through the leukocyte reduction-type filter **12**, such as by gravity feed. After passing through the filter where cells such as nucleated cells, platelets, or a mixture thereof are retained, the remainder of the physiological solution and its constituents (such as red blood cells) flow into the drain bag **14**. In a back-flush step (FIG. 4C), valves **11** and **13** to the collection bag **10** and drain bag **14**, respectively, are closed. The valves **15** and **17** to the syringes **9** and **19**, respectively, are opened. In the recovery step (FIG. 4D), osteogenic

cells are backflushed from the filter 12 when recovery solution from syringe 19 flows through valve 17 to force the osteogenic cells into syringe 9. The collection in syringe 9 comprises the recovered cells and in some embodiments is not processed further but is applied to a bone defect, optionally after combining the cells with a scaffold material. In alternative embodiments, the cells in syringe 9 are referred to as a feed for a subsequent step in the process, and the syringe may be referred to as a feed syringe 9.

Please replace the following paragraph [0171] in the specification:

[0171] ~~FIG. 9 shows~~ FIGS. 9A-9E show a schematic of the incorporation of a fat reduction filter 8 into the device used to prepare an osteogenic cell concentrate. The physiological solution is passed *via* syringe 6 through the exemplary fat reduction filter 8 component into a collection bag 10 (FIG. 9A). The fluid, reduced in fat particle content, is then processed through the leukofilter 12 as shown in FIGS. 4 and 9. If necessary, the cell suspension recovered from the leukofilter 12 is then processed through the hollow fiber filter 30 in either cross-flow mode (FIGS. 5 and 6) or dead-end mode (FIGS. 7 and 8).

Please replace the following paragraph [0177] in the specification:

[0177] After determination of initial nucleated cell count, four-ml of BMA from each rabbit were pooled to yield a combined volume of 12-mL. The pooled BMA sample was then passed through the exemplary filtration device as shown schematically in FIGS. 5, 6, and 10. ~~In FIG. 10~~ FIGS. 10A-10E, the aggregate filter 7 may remove large particles of material, which in certain embodiments comprises fat particles.